APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,668	02/09/2004	Robert Mack	CD03157	1456

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CYPRESS SEMICONDUCTOR CORPORATION
198 CHAMPION COURT
SAN JOSE, CA 95134-1709

EXAMINER
TAYONG, HELENE E

ART UNIT	PAPER NUMBER
2611	

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09/16/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/775,668	MACK ET AL.
	Examiner	Art Unit	
	HELENE TAYONG	2611	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 September 2009</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>4-6 and 16-21</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>4-6 and 16-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>09 February 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>06/30/09</u>

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____

U.S. Patent and Trademark Office
PTOL-326 (Rev. 08-06)   **Office Action Summary**   Part of Paper No./Mail Date 20090910

DETAILED ACTION

Request for Continued Examination

1.   The request filled on 9/1/09 for a Request for Continued Examination (RCE)

under 37 CFR 1.114 based on parent Application No. 10775668 is acceptable and RCE

has been established. An action on the RCE follows.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 4, 16, 17 and 21 are rejected under 35 U.S.C. 103(a) as being obvious

over Raphaeli et al (US 7463709) (see ids).

        (1) with regards to claims 16 and 21;

         Raphaeli et al discloses in (fig. 1, 14) an encoder and in (fig. 9, 184, a method

for encoding data), comprising:

        a spread spectrum encoder (fig. 1, 20) configured to encode data values with

one or more spread spectrum codes and generate a corresponding spread spectrum

encoded data stream (col. 7, lines 29-41, fig. 9, 186, col. 9, lines 40-45); and

        a slip encoder (14) configured to encode other multiple different data values (

sync sequences) into the encoded data stream by varying time spacing (sequence gap)

between the spread spectrum codes (col. 5, lines 35-51, col. 7, lines 1-17),

wherein the other data values (fig. 1, sync/data) correspond to an amount of clock periods (sync sequences) inserted by the slip encoder (14) between the generation of adjacent spread spectrum codes so that generation of the entire spread spectrum codes (step 186) are completed and then time gaps of varying duration (see table 1) with no spread spectrum codes are inserted before starting generation of adjacent subsequently transmitted spread spectrum codes (col.8, lines 26-67, col. 9, lines 1-45), where an entire total amount of the time gap from an end of transmission of the entire spread spectrum codes to a beginning transmission (fig.3, 72) of the next subsequently transmitted adjacent spread spectrum code corresponds to one of the other multiple different data values that is not spread spectrum encoded and different durations of the entire total time gap used between different pairs (see table 1.

Raphaeli et al discloses a first encoder and a second encoder except for that the spread spectrum encoder (spreading waveform generator 20) is placed after (reversal of part) the silp encoder (14).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to place the spreading wave form generator (20) to generate spectrum encoded data in the spread spectrum communications transmitter fig. 1, in front of the slip encoder (14), since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. in re Einstein, 8 USPQ 167.

(2) with regards to claim 4;

Raphaeli et al further discloses wherein the spread spectrum encoder (spreading waveform generator, 20) includes a storage device (fig. 1, 24, spreading waveform ROM) used for storing the one or more spread spectrum codes and a shifter for serially encoding some of the data values with the one or more spread spectrum codes (figs. 1, 9 , spread spectrum transmission communication transmitter col. 2, lines 33-35 and col.7, lines 29-41).

(3) with regards to claim 17;

Raphaeli further discloses delaying (tables 1 and 2) encoding between each of the first set of data values into the encoded data stream for inserting a number of time increments between adjacent PN codes corresponding to the second set of data values (col.8, lines 26-67 and col.9, lines 1-45).

4.   Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being anticipated over Raphaeli et al (US 7463709) (see ids) in view of The Admitted Prior Art (APA) (fig. 2).

(1) with regards to claim 5;

Raphaeli discloses all of the subject matter discussed above except for the shifter including a multiplexer having inputs for receiving different chips of the spread spectrum codes and an output, a code counter coupled to the multiplexer sequentially selecting different chips of the spread spectrum codes for outputting from the multiplexer and an exclusive-OR circuit combining the outputs from the multiplexer with the data values.

However, the APA in fig. 2 discloses a spread spectrum (SS) transmitter that
includes a multiplexer (32) having inputs for receiving different chips of the spread
spectrum codes and an output (col.pg.2, lines 9).

a code counter (34)coupled to the multiplexer (32) sequentially selecting different
chips (output of 32) of the spread spectrum codes for outputting from the multiplexer
(pg. 2, lines 9-10).

an exclusive-OR circuit (36) combining the outputs from the multiplexer (32) with
the data (34) values (pg. 2, lines 14-15).

It would have been obvious to one of ordinary skill in the art at the time of the
invention to have utilized the method as taught in APA fig. 2 in the device of Raphaeli in
a manner as claimed in this application for the benefit of error detection.

(2) with regards to claim 6;

Raphaeli et al discloses wherein the slip encoder (14) and talks about a shift
index (fig. 9, steps 184-186)

Raphaeli discloses all of the subject matter discussed above but is silent about a
slip counter that delays the code counter from outputting the chips for adjacent spread
spectrum codes according to associated data values.

However, the APA in fig. 2 a spread spectrum (SS) transmitter that includes a
code counter (34) coupled to the multiplexer (32) sequentially selecting different chips
(output of 32) of the spread spectrum codes for outputting from the multiplexer (pg. 2,
lines 9-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the device as taught in APA fig. 2 in the device of Raphaeli in a manner as claimed in this application for the benefit of error detection.

5.   Claims 18-20 are rejected under 35 U.S.C. 103(a) as being anticipated over Raphaeli et al (US 7463709) (see ids) in view of APA (fig. 2) as applied in claim 16 above, and further in view of Van Driest (US 6115411).

(1) with regards to claim 18;

Raphaeli as modified by APA discloses all of the subject matter as described above except for specifically teaching transmitting and receiving the encoded data stream using a wireless Universal Serial Bus (USB) device.

However Van Driest in the same endeavor teaches transmitting and receiving the encoded data stream using a wireless Universal Serial Bus (USB) device (IEEE 802.11 standard, col. 5, lines 29-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized the method of Van Driest in the method of Raphaeli as modified by APA in a manner as claimed in this application for the benefit of increasing data transmit rate.

(2) with regards to claim 19;

Raphaeli as modified by APA discloses all of the subject matter as described above except for specifically teaching extracting the first set of data from the encoded

data stream by identifying the PN codes in the encoded data stream and extracting the

second set of data from the encoded data stream by identifying an amount of time gap

between the identified PN codes.

However Van Driest in the same endeavor teaches extracting the first set of data

from the encoded data stream by identifying the PN codes in the encoded data stream

and extracting the second set of data from the encoded data stream by identifying an

amount of time gap between the identified PN codes (col. 7, lines 58-68 to col.8, lines 1-

4).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to have utilized the method of Van Driest in the method of Raphaeli

as modified by APA in a manner as claimed in this application for the benefit of

increasing data transmit rate.

 (3) with regards to claim 20;

Raphaeli as modified by APA discloses all of the subject matter as described

above except for specifically teaching comparing samples of the encoded data stream

with reference PN codes; identifying bits in the second set of data values according to

the amount of identified time slip, identifying an amount of time slip between the

identified bits in the first set of data values.

However Van Driest in the same endeavor teaches comparing samples of the

encoded data stream with reference PN codes (col. 8, lines 1-4), identifying bits in the

second set of data values according to the amount of identified time slip (col. 8, lines 8-

12), identifying an amount of time slip between the identified bits in the first set of data

values (col. 7, lines 57-61).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to have utilized the method of Van Driest in the method of Raphaeli

as modified by APA in a manner as claimed in this application for the benefit of

increasing data transmit rate.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Raphael (US 6064695) discloses Spread spectrum

communication system utilizing differential code shift keying.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to HELENE TAYONG whose telephone number is

(571)270-1675. The examiner can normally be reached on Monday-Friday 8:00 am to

5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Liu Shuwang can be reached on 571-272-3036. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Helene Tayong/
Examiner, Art Unit 2611

9/10/09
/Shuwang Liu/
Supervisory Patent Examiner, Art Unit 2611